Remarks

Claims 1, 6, 7, 9, 13-15, 22, 24, 25, 30-40, 45, and 48-50 are pending in this application, and subject to a Restriction Requirement. Claims 1, 6, 13, 22, and 40 are amended herewith, and new claims 53 and 54 are added. After entry of this amendment, **claims 1, 6, 7, 9, 13-15, 22, 24, 25, 30-40, 45, 48-50, 53 and 54 are pending** and ready for substantive examination. The specification is amended to correct two typographical errors. No new matter is added by these amendments.

Examiner Interview

Applicants thank Examiner Wax for the courtesy of a brief telephone interview on August 16, 2007, during which Applicants' intention to amend claim 1 and traverse the standard for restriction were discussed. Examiner Wax indicated that the case has been reassigned, and Applicants invite the new Examiner to contact the undersigned to discuss the Restriction Requirement if questions remain after this document is entered into the file.

Response to Restriction Requirement

Claims 1, 6, 7, 9, 13-15, 22, 24, 25, 30-40, 45, and 48-50 of this §371 National Stage application were indicated as being subject to a Restriction Requirement. In particular, Groups I-XV have been identified. In addition, Group VIII was indicated as including nine species corresponding to SEQ. ID NOs: 2-4, 7, 8, and 10-13.

The Office action states that "the inventions listed as Groups I-XV do not relate to a single general inventive concept under PCT Rule 13.1." Applicants traverse the requirement for restriction. All of the Groups do in fact relate to a single special technical feature, which feature makes a contribution over the prior art. As such, all of the claims should be examined together. Applicants request that the requirement for restriction be withdrawn for all Groups in light of the arguments presented herein. In the alternative, Applicants request that the requirement for restriction be modified in one of the ways suggested below.

Standard for Analyzing Unity of Invention

37 CFR § 1.475 requires unity of invention in a national stage application such as this; unity of invention is present when a group of inventions are "so linked as to form a single general inventive concept." [*See* 37 CFR § 1.475(a).] "A group of inventions is considered linked to form a single general inventive concept where there is a technical relationship among the inventions that involves at least one common or corresponding special technical feature." [MPEP § 1893.03(d).]

Further, "the expression 'special technical features' shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art." [*See* 37 CFR § 1.475(a).]

This makes it clear that an analysis with regard to unity of invention occurs in two stages. First, it must be determined if there is a **special technical feature** shared among the claims/groups of inventions, such that they are linked to form a single inventive concept. If there is, then one asks whether that special technical feature **defines a contribution over the prior art** for each of the claimed inventions. If no relevant prior art is identified, then there can be no finding of lack of unity.

Requirement for Identification of a Special Technical Feature

In the current action, the Office has failed to identify a "special technical feature" of Groups I-XV. Thus, as discussed further below, the Restriction Requirement does not reflect the proper application of the appropriate standard of unity. Without defining a feature that is a feature of all of the claims/inventions/groups, the Office has not defined any special technical feature and has not properly performed the required analysis.

Applying the Standard in the Current Case

Groups I through XV are linked to form a single general inventive concept. Upon even a brief review of the application and the claims, it is clear that the subject matter as claimed relates to **the identification of Germination-Arrest Factor (GAF), including its biological activity and sources**. This is clear from the entire Specification, including, but not limited to: the

Summary on page 2, which indicates that the disclosure is directed to "a Germination Arrest Factor"; the description of bacterial isolates that produce GAF, pages 27-28; the description of GAF and variant GAF sequences, pages 28-32; the description of assays for measuring GAF activity, page 33; the description of GAF formulations, pages 33-37; the description of methods of using GAF, pages 37-39; and Examples I-V, which describe methods of producing, isolating, testing, and using GAF.

It is further clear that this special technical feature is shared among all of the claims. The special technical feature of **GAF** is *explicitly* recited at least in each of the independent claims, including claim 1 as amended.

Moreover, this special technical feature defines a contribution over the prior art for each of the claimed inventions in the group of inventions. There is no reference of record in the case that teaches GAF. No reference has been cited in the current Restriction Requirement, which would appear to be a clear admission that there is no relevant prior art.

Since the Office has provided neither allegation nor evidence that **the identification of GAF and its sources and biological activity** is disclosed or rendered obvious in the prior art, this feature must be presumed to constitute an appropriate "corresponding special technical feature" sufficient for the fulfillment of the unity of invention requirement. [*See* 37 CFR § 1.475(a); MPEP § 1893.03(d).]

In summary, **as required by § 1.475**, the claims pending in the application have unity of invention because they are directed "to a group of inventions so linked as to form a single general inventive concept" because "there is a technical relationship among [the] inventions involving one . . . corresponding technical feature[]" – **the identification of GAF and its sources and biological activity** – and this special technical feature "define[s] a contribution . . . over the prior art."

In order to emphasize that Applicants are entitled to examination of claims directed to GAF, regardless of which *Pseudomonas* strain produces the factor, claim 1 has been amended to

remove reference to specific strains and to clarify that the isolated *Pseudomonas* strain produces GAF. New claims 53 and 54 reference the specific *Pseudomonas* strains and other strains having similar characteristics.

Independent/Dependent Claims

Applicants further note that "Unity of invention has to be considered in the first place only in relation to the independent claims . . . and not the dependent claims." (See "Unity of Invention", Section (c), Annex B to the Administrative Instructions under the PCT, at page AI-55, MPEP (Rev. 4, October 2005). Further, in section (c)(i) it is clearly stated that:

> If the **independent claims avoid the prior art** and satisfy the requirement of unity of invention, **no problem of lack of unity arises in respect of any claims that depend on the independent claims**. In particular, it does not matter if a dependent claim itself contains a further invention. Equally, no problem arises in the case of a genus/species situation where the genus claim avoids the prior art. Moreover, no problem arises in the case of a combination/subcombination situation where the subcombination claim avoids the prior art and the combination claim includes all the features of the subcombination. (*emphasis added*)

In the pending claims, claims 1, 13, and 49 are each independent claims. Claims 6, 7, 9, 22, 24, 25, 30-40, 45, 48 (and new claims 53 and 54) depend from claim 1 directly or indirectly, and therefore absolutely must include all the features of claim 1, including GAF. Similarly, claim 14 depends from claim 13, and claim 50 depends from claim 49, and therefore both dependent claims absolutely must include all the features of claim 13 or 49, respectively, including GAF. In the absence of a reference of record in the case that teaches GAF, the claims of linked Groups I-XV must be examined together. Thus, Groups I-XV should be recombined and examined in the current case.

Since unity of invention exists among all of the Groups in the present application, it is inappropriate to subject the claims to a requirement for restriction. Applicants request that the requirement be withdrawn, that all of Groups I through XV be rejoined, and that all of the claims be examined in the current case.

Request for Partial Recombination of Groups

At the very least, even if all of the Groups are not recombined and all of the claims examined together, it is Applicants' position that the claims comprise no more than two Groups, each having five species. Applicants' suggested re-definition of Groups and species is shown in the table below:

	Group I (Includes present Groups I-X)	**Group II (Includes present Groups X-XV)**
	***Pseudomonas* strains and GAF produced by *Pseudomonas* strains, methods of use comprising applying the strain or GAF, compositions comprising GAF, methods of making GAF, and kits comprising GAF**	**Methods of using GAF to investigate the regulation of seed germination**
Species		
A	*Pseudomonas fluorescens* Biotype B E34 and GAF produced by *Pseudomonas fluorescens* Biotype B E34	Methods of using GAF produced by *Pseudomonas fluorescens* Biotype B E34 to investigate the regulation of seed germination
B	*Pseudomonas fluorescens* Biotype C WH19 and GAF produced by *Pseudomonas fluorescens* Biotype C WH19	Methods of using GAF produced by *Pseudomonas fluorescens* Biotype C WH19 to investigate the regulation of seed germination
C	*Pseudomonas fluorescens* Biotype C WH6 and GAF produced by *Pseudomonas fluorescens* Biotype C WH6	Methods of using GAF produced by *Pseudomonas fluorescens* Biotype C WH6 to investigate the regulation of seed germination
D	*Pseudomonas putida* Biotype B AH4 and GAF produced by *Pseudomonas putida* Biotype B AH4	Methods of using GAF produced by *Pseudomonas putida* Biotype B AH4 to investigate the regulation of seed germination
E	*Pseudomonas putida* Biotype B AD31 and GAF produced by*Pseudomonas putida* Biotype B AD31	Methods of using GAF produced by *Pseudomonas putida* Biotype B AD31 to investigate the regulation of seed germination

In the event that the Office is not convinced to recombine all of the original Groups into this case, Applicants request that the Groups be partially recombined as proposed in the above table, and that a species election be permitted. Upon the allowance of claims directed to the elected species, the other species should be recombined and examined. If the Office accepts this

route, Applicants would elect Group I, and Species C (*Pseudomonas fluorescens* Biotype C WH6) for initial prosecution.

Provisional Election

Under protest, and only to comply with 37 CFR §1.499, Applicants hereby provisionally elect Examiner's Group III (defined in the Office action as corresponding to claims 1, 22, 24, 25, and 49, as they relate to *Pseudomonas fluorescens Biotype* C WH6). To the extent that the species election is maintained, Applicant hereby provisionally elects SEQ. ID Nos. 7 and 8. In accord with 37 CFR §1.143, Applicants specifically reserve the right to petition to have the appropriateness of the finding of lack of unity/restriction requirement reconsidered, if it is maintained in spite of this response.

Conclusion

Applicants request that the Restriction Requirement be withdrawn or modified as suggested herein. The Examiner is invited to telephone the undersigned if any questions remain concerning the requirement for restriction, or the comments made herein. Otherwise, the present application is ready for substantive examination, and such action is requested.

Respectfully submitted,

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